



Graphic Resource Requirements for NPS Wayside Exhibits

Introduction

Making effective wayside exhibits often involves finding and acquiring the photographs that best illustrate the interpretive significance of a site. For example, photographs may show historic events which illustrate and define that significance. Historic images may dramatically depict changes in landscapes over time. Nature photography can provide visitors with an up-close study of wildlife not otherwise possible. Macro, or microscopic, photography can make the invisible known. And, aerial photography has the potential to elevate visitor understanding of a resource to new heights.

The large format of wayside exhibits, and the production processes involved in their fabrication, dictate specific technical criteria which are different from those for small-format printing or web publishing. In addition to subject-matter appropriateness, a photograph must meet these technical quality requirements in order to reproduce well.

This paper addresses technical requirements for the traditional (film) photographic medium and for digital formats which capture photographic images. These requirements are based upon the specific techniques and technology currently used in imaging wayside exhibit panels.

Film versus digital photography

Traditional (film) photography is usually preferred over digital photography for wayside exhibit production. Commonly available scanners can capture sufficient resolution and bit-depth to maintain image quality through enlargement and the production process. Resolution (the number of pixels per inch) and bit-depth (the number of colors described by each pixel) are factors which describe the color and scaling capabilities of a digital image. Currently, most widely available digital cameras simply do not match the performance available from using a scanner to scan original film photography. The recommendations below reflect this current state of available technology.

Black-and-white images

Reproduction-quality, 8"x10", glossy, black-and-white prints are the resource of choice. A print created from an original negative is preferred, but a print made from a reproduction-quality 4"x5" copy negative is acceptable. The print will be continuous tone for grayscale images. Line art subjects should be "high contrast" or "photostat" prints.

Color images

Large images (for use at full wayside panel size):
For images which will be reproduced at full wayside panel size, i.e., 36"x48" or 36"x24", 4"x5" color transparencies are highly recommended. High-quality, extremely sharp, 35mm or 120 medium format transparencies may be acceptable, depending on specific project conditions.

Smaller images (for use as secondary or inset images, up to 5"x7" final reproduction size):
High-quality, extremely sharp, 35mm slides are acceptable. Such images would have been taken using professional quality camera equipment and a tripod.

Original transparencies are preferred and will yield the highest quality wayside reproduction. Duplicate transparencies may be acceptable if they are reproduction quality. If you use the duplication process to increase the format size (for example, from 35mm to 4"x5") of an image, be sure to advise us of that fact. Original color negatives are acceptable if accompanied by a color accurate print for reference. Prints alone are generally not acceptable.

Graphic Resource Requirements for NPS Wayside Exhibits, *continued*

Original artwork or other "flat art" images

Copystand photography of original, "flat" artwork such as paintings should be furnished in 8"x10" reproduction-quality transparency format (preferred) or 4" x 5" transparency format. Copy photography should include a grayscale and color test strip for reference. Alternatively, art can be forwarded to HFC and digitally scanned directly on a large format scanner by wayside panel producers.

Reproduction quality

When acquiring copystand photography or duplication services, work with a reputable, professional photographic reproduction source. Specify reproduction quality.

Scanning

Scans of images may be useful for transmitting images for preliminary evaluation by the exhibit planners and designers. JPEG, TIFF or EPS files sent via e-mail or CD can be used for this review. Compress large files for e-mail transmittal. When sending numerous or large files via e-mail, please communicate beforehand with the recipient regarding your intentions.

Final scanning will be performed by Harpers Ferry Center. Quality control of final scans is essential to assure high-quality reproduction. Since image quality and color rendering vary widely among devices such as scanners, monitors, and printers, it is essential that the wayside panel fabricator control scan quality.

Please do not attempt to make production scans yourself. Third-party production scans will only be accepted if pre-authorized by HFC, on a case-by-case basis.

Digital photography

Large images (for use at full wayside panel size):

To be acceptable for wayside exhibit reproduction, original digital photography should be captured at 200-300ppi at the FINAL reproduction size used in the wayside exhibit. (Example: to be used as a full-bleed 36"x24" graphic, an image would need to be captured at 200ppi yielding a 99Mgb (RGB) file.) It is likely that only images captured on high-end 35mm SLR or large-format cameras equipped with Multishot or Scan-Back digital backs will be acceptable.

Smaller images (for use as secondary or inset images, up to 5"x7" final reproduction size): Images captured with a high-quality digital camera at 200ppi resolution, at final reproduction size, may be suitable. Because equipment varies widely, consult with your wayside designer on a case-by-case basis.

Interpolation

Interpolation—using software to increase the size of a digital image file by creating more pixels—is usually NOT advisable. The quality of an interpolated image is affected by the quality of the software technique and by the nature of the particular image. Do not provide images for wayside use which have undergone interpolation.

Copyright

Whatever the photograph or format you select or acquire, make sure that use rights from photographers and model releases from persons appearing in photos have been secured. Contact the HFC Graphic Research office for complete information on copyright.

Further information and questions

This paper is intended as a general overview. Space limits the amount of background information which can be included here to fully explain the technical background for the preferences stated. Your wayside exhibit planner or designer can answer questions specific to the graphics for your project. A variety of information regarding graphics and photographs can also be found on the Harpers Ferry Center website—<http://www.nps.gov/hfc>, or at <http://data2.itc.nps.gov/hafe/hfc/resources.cfm>.